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ASH TRAY

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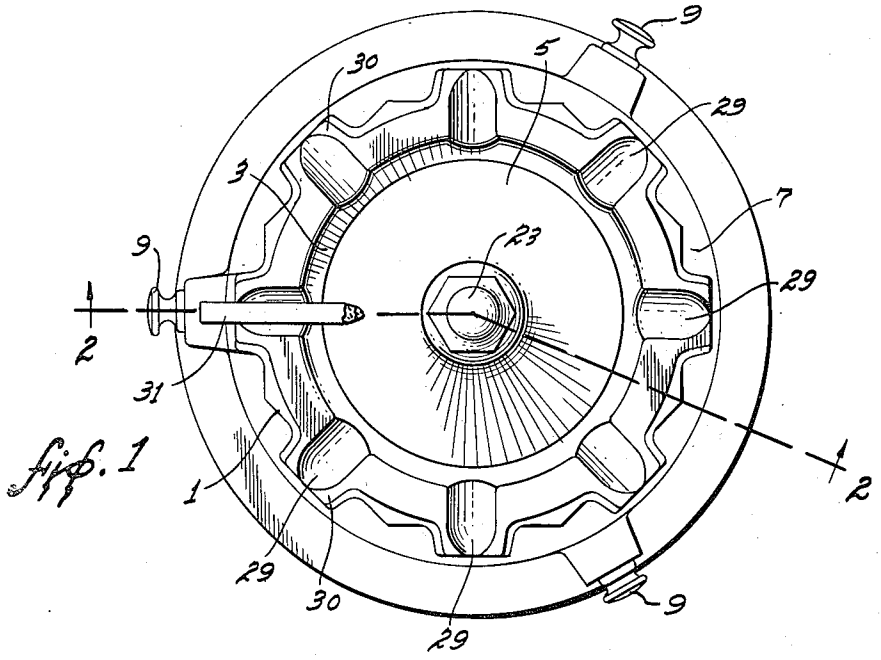

Fig. 1

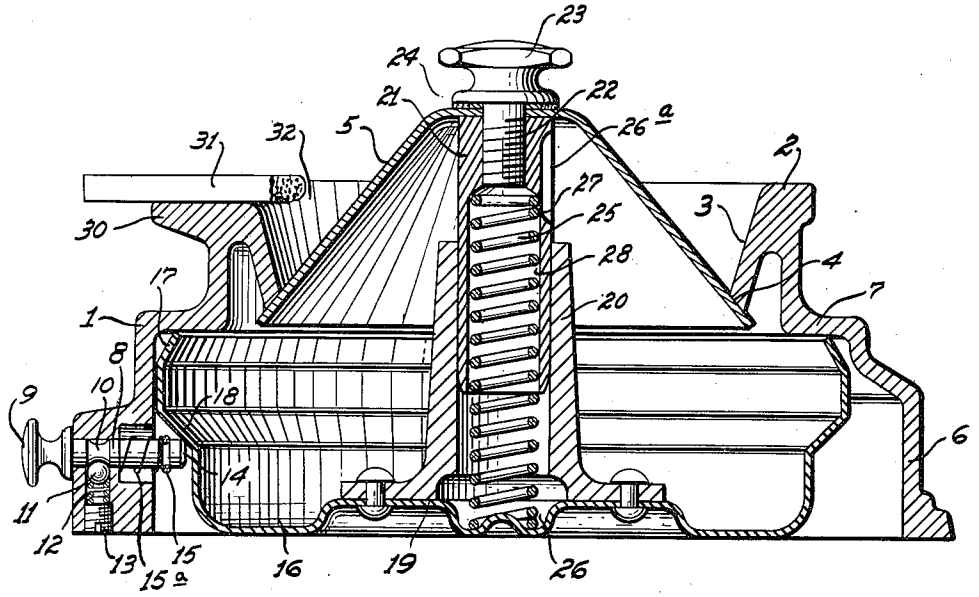

Fig. 2

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ASH TRAY

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4 Claims. (Cl. 131—51)

This invention relates to an improvement in ash trays or holders, the object being to provide an improved ash holder having a part for first receiving ashes from a pipe, cigarette or cigar and accompanying litter from which it may be deposited into a receptacle detachably supported within the body of the device and securely held against displacement.

A further feature of the invention is involved in the formation of a body member having an inverted cone wall depending from the upper end and open at the center. The body is also open at the bottom into which the final receptacle may be introduced, the depending cone portion cooperating with a reversely positioned spring supported cone element to provide an initial receiver for ashes and litter and by depression of spring supported cone element an opening is provided for position of ashes and the like from the initial receptacle to the removable receptacle.

These objects and other additional novel features of construction and arrangement of parts are hereinafter more fully described and claimed, and an ash tray embodying the various novel features of my invention is shown in preferred form in the accompanying drawing in which—

Fig 1 is a plan view of my improved ash tray.

Fig. 2 is a vertical section taken on line 2—2 of Fig. 1.

The body of the structure is preferably formed of one piece shown at 1. This is merely a shell having the rim 2 at the upper end and a comparatively short inverted truncated cone formed by the depending wall 3, the terminal edge 4 of which is also reversibly inclined providing a seat for the reversely positioned cone member 5 preferably of sheet metal or other appropriate material. Below the upper end the body is of greater diameter having the vertical wall 6 and connected with the wall below the rim 2 by a shoulder 7, the purpose of which will be hereinafter explained. This lower vertical wall 6 of the body preferably has a series of three latch members 8 consisting of a rod like portion slidable in a transverse aperture in the vertical bottom wall 6 and movable by means of the handle end 9. Each of these rod like portions of the latch member 8 has a circumferential groove 10 in which a ball 11 seats by action of a spring 12 which are supported in a vertical aperture by means of a threaded plug 13 introduced thereinto from the bottom edge of the vertical wall 6. The inner ends of these rod like portions 8 of the latch members are also formed with a tapered end 14 and at a distance back of the taper a ring 15 is secured in a groove formed therefor in the rod. This ring 15 provides a means preventing the complete withdrawal of the latch member from its aperture and the spring pressed ball simply provides a means preventing displacement of the latch member accidentally, the ball being yieldably retractable in its aperture by pulling on the handle 9. Coil springs 15a are provided between the ring 15 and the wall of the body 1 to urge the latches 8 toward the receptacle 16. If desired such springs may be designed sufficiently strong so as to eliminate the necessity of the ball locks 11.

There are preferably three of these latch members and an ash receptacle, indicated generally at 16, is provided being freely movable to position through the open bottom end of the body. The upper open end of the ash receptacle has an inwardly inclined terminal wall 17 which automatically pressed the latch members outwardly by insertion of the receptacle 16 and below this upper end the receptacle is also provided with a reversely inclined wall 18 beneath which the tapered ends of the latch members engage as the receptacle reaches its position or even prior to its final position in which the upper edge of the inwardly inclined flange portion 17 seats against the under side of the shoulder 7. The ash receptacle is preferably of sheet metal and has secured to an impressed central portion 19 thereof a hollow tubular member 20. The coned member 5 is truncated in form and provided on its under side with a stem 21 slidable in the tubular member 20, the stem 21 being secured in place by a bolt having a threaded shank 22 passing through an aperture in the truncated end of the cone member 5 and threaded into an aperture provided therefor in the stem 21. A hand nut 23 is provided on the shank 22 and a packing ring 24 may be provided in the base of the nut and the upper surface of the truncated end of the cone.

The stem 21 below the threaded shank 22 is hollow to receive a helical spring 25 which seats at the bottom in a recess 26 provided therefor in the base of the receptacle 16 in the construction shown and thus normally acts to force the cone member 5 to contact with the inwardly tapered end portions 4 of the cone wall 3. In depressing the cone member 5 by means of the hand nut 23 air would tend to be compressed in this chamber for the spring formed by the tubular member 20 and stem 21 and to prevent this the wall of the stem 21 has a groove 26a of considerable length cut into the side wall and providing an opening

at 27 to the spring chamber 28. The length of the groove 26a is such that at the greatest depression of the cone member 5 in normal use, air may flow from this spring chamber 28 through the aperture 27 to the interior of the cone member 5 which, under such condition, is open to atmosphere between the lower end of the member 5 and the tapered seat 4 for the cone.

The rim 2 is provided with a series of grooved portions 29 the rim being laterally extended at each groove as shown more clearly at 30 in Fig. 2 and providing a support for a cigar or cigarette which is here indicated at 31. The cigar or cigarette if it is desired may be placed in the groove with the ash end facing inwardly so that any ashes from the cigar or cigarette fall into what I have termed the initial receptacle or receiver formed by the space 32 between the outer face of the cone member 5 and the inner face of the cone wall 3.

Thus, ashes and litter may accumulate in the space 32 and this space may be freed of such ash and litter by depressing the coned member 5 by placing the hand upon the nut 23 which has a form adaptable for the purpose and in thus depressing the same the ashes and litter fall by gravity between the outer face of the coned member 5 and the tapered edge 4 of the wall 3 into the receptacle 16, the open upper end of which is considerably greater in diameter than the diameter of the lower end of the member 5.

By this arrangement of parts the tray may be used throughout a considerable length of time before it is required to be emptied. The usual trays in use not only leave all the litter and ash in view but are of such small capacity as to require frequent emptying thereof usually at some point remote from the point of use. This described relationship of parts embodying my invention obviates such necessity for frequent cleaning and provides opportunity to deposit the ashes and litter in a receptacle not within vision of the users thereof.

To empty the final receptacle 16 the user may, through release of the latch members 9, raise the body member 1 from its association with the receptacle 16 and the coned member 5. The coned member 5 may then be withdrawn from association with the receptacle and the receptacle then emptied in the usual way.

From the foregoing description it is believed evident that the structure is comparatively simple and inexpensive, that the described functional relationship of the parts provides a structure involving the objects of the invention, and it is pointed out that various changes in the structure may be made without departing from the spirit and scope of the invention as set forth in the appended claims.

Having thus briefly described my invention, its utility and mode of operation, what I claim and desire to secure by Letters Patent of the United States is—

1. In an ash tray, a hollow body having an opening centrally therethrough, the body at the top opening having a wall in the form of an inverted truncated cone and providing a central aperture, the opening at the opposite end of the body being of greater diameter than said central aperture, an internal shoulder formed between the ends of the body, a receptacle of sheet metal having an open upper end, the upper edge of the receptacle engaging the under face of the said internal shoulder, a plurality of spring-actuated latch members reciprocably mounted in the wall of the body at the lower end, the receptacle wall in cross section having an inwardly inclined portion at the open end, a cylindrical part and an inwardly and downwardly inclined portion therebelow merging with the receptacle bottom of less diameter than the said circular portion thereof, the said inclined portions of the receptacle wall providing a means whereby, in passing the receptacle into the bottom opening of the body, the latch members are first moved outwardly by the upper inclined portion and then permitted to move inwardly as the second of said inclined portions is engaged by said latch members to automatically hold the body member with its open end in contact with the shoulder, a tubular stem centrally positioned in the receptacle having an open upper end, a tubular element slidable in the open end of the stem, spring means positioned in the stem and tubular element for forcing the slidable element upwardly, a sheet metal coned element supported by the slidable member, said cone element having outwardly and downwardly extending walls of a diameter at the bottom greater than the opening of the coned wall and held in engagement therewith by the spring, the said coned wall of the body and sheet metal cone providing a V shaped receptacle for ash and litter and which may be discharged into the receptacle by depressing the sheet metal cone against the tension of its spring.

2. In an ash tray, a hollow body having an opening at the top and bottom, the upper open end of the body having an inwardly and downwardly inclined frusto-conical wall providing a central opening below the said upper end and the opposite end having an opening of greater diameter, the wall of the body being formed with an internal shoulder between the ends, a flange depending from said shoulder and forming a base for the ash tray, an open top receptacle insertable in the bottom opening of the body, means for holding the open end of the receptacle in engagement with the under face of the shoulder, said means supporting the entire receptacle within said flange, a tubular stem extending upwardly toward the open end of the receptacle, a coned element above the receptacle having a depending stem reciprocable in the stem of the receptacle, and a spring interposed between the said stems forcing the coned element upwardly to engagement with the downwardly inclined frusto-conical wall at the upper end of the body.

3. An ash tray comprising a hollow body member of the desired form having an opening to the interior both at the top and the bottom, the opening at the top having an inwardly and downwardly inclined frusto-conical wall providing a circular aperture at the lower end, the opposite end of the body having an opening of greater diameter, said body having an internal shoulder at a point below the terminal portion of the frusto-conical wall, an annular flange extending downwardly from said shoulder and providing a supporting base for the ash tray, a receptacle having an open upper end insertable through the bottom opening of the body with the upper edge to contact the under face of the shoulder, a coned member having an outwardly inclined depending wall, the lower end of which is of greater diameter than the aperture of the frusti-conical wall of the body and positioned therein, spring means between the receptacle and the coned member tending to hold the coned member in engagement with the frusto-conical wall to close the

aperture thereof, the V shaped area defined by the coned wall and frusto-conical member providing an initial receptacle for ashes and depression of the coned member against the tension of its spring providing an opening through which the ash and litter may pass by gravity into the receptacle, and releasable means for holding the receptacle in position within the flange of the body.

4. In an ash tray holder, a hollow body member having an opening at the top and bottom, the member at the top being inwardly and downwardly inclined providing a frusto-conical wall having a central aperture below the top, the open end of the bottom being of greater diameter than the opening at the top providing an internal shoulder therebetween and a supporting flange extending downwardly from said shoulder, an open ended receptacle insertable within said flange with the edge thereof in engagement with the under surface of the shoulder, a cone member supported by the receptacle and engaging the opening of the frusto-conical wall, spring means between the receptacle and the cone member to hold the same in engagement with the wall and permitting release of the same by downward movement toward the receptacle, and a spring-actuated means for holding the receptacle in engagement with the shoulder and within said depending flange.

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